parent process

Obtain command line argument to get number of levels (lvls) and the number of arguments (argc).

no

yes

argc <> 2 ?

Display error message and exit.

Display error message and exit.

Display header

no

yes

lvls >5 OR lvls <=0

yes

Exit

Display level, process ID, parent ID and both child IDs.

Generate random sleep time between 0 and 4 sec.

Next page

Generate first child process by fork(). Determine value of fork() return.

Add 1 to i.

no

STOP

I < lvls

I = 0

START

yes

yes

No

(child2 process begins here)

No

(child1 process begins here)

Previous page

Display error message and exit.

Display level, process ID, parent ID and both child IDs.

Generate random sleep time between 0 and 4 sec.

Exit

BREAK

If childpid2 <> 0 (parent process)

no

If childpid2 == -1

no

Display error message and exit.

yes

If childpid1 == -1

yes

Childpid1 = 0 (reinitialize)

Generate second child process by fork(). Determine value of fork() return.

If childpid1 <> 0 (parent process)